

25/02

D3396-
D412-742-013

Work Order ID 66529

Friday, February 18, 2011 1:52:06 PM

Page 1

Item ID: DSI 9517-011

Accept

Revision ID:

Item Name: Alternate Wearplate Installation

Start Date: 2/18/2011 Start Qty: 4.00

Required Date: 2/25/2011 Req'd Qty: 4.00

Reference:

Approvals:

Process Plan: *W*

Date: _____

Tooling: _____

Date: _____

Run Start

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

DSI 9517

A

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP DSI9517-011 CHG001

*Disposal**for BG 11-02-24*

110

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

Puff 24 64

120

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

*Disposal**(x4)**Pro-5**(1 set Assembled on w/o 63176)
D412-742-013*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: DS19517-011 PAR #: N/A Fault Category: Skidsteer NCR: Yes No QA Date: 11.03.03
 Resolution: re-work Disposition: re-work QA: N/C Closed: cl Date: 11/03/04

NCR: <u>66529</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>11/03/02</u>	<u>#120</u>	Found at assembly that the $\phi.438$ will not align with the saddle. R.L. Process	<u>11.03.02</u>	Drill out the $\phi.438$ " saddle hole in wear plate to $\frac{1}{2}$ " $\phi.500$ " dia. this w/o only + only on	<u>11-03-02</u>	<u>11/03/02</u>	<u>11.03.02</u> see attached	<u>11/03/02</u>
		D4095-041 B66501 + D4095-043 B66502	<u>11.03.02</u>	the two that are installed in D412-742-043 B66502	<u>11/03/02</u>	<u>11/03/02</u> Pick ok not great	<u>11.03.02</u> see attached	<u>11/03/02</u>
				Touch up P/K + Grand Grand as needed per QST004	<u>11-03-02</u>	<u>11/03/02</u>	<u>11.03.02</u> ATTACHED EMAIL.	

NOTE: Date & initial all entries

Work Order ID 66529

Friday, February 18, 2011 1:52:06 PM

Page 2

Item ID: DSI 9517-011

Accept

Setup Start

Revision ID:

Stop

Item Name: Alternate Wearplate Installation

Start Date: 2/18/2011 Start Qty: 4.00

Cust Item ID:

Required Date: 2/25/2011 Req'd Qty: 4.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130

0.00



Packaging

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP DSI9517-011
Location: _____*11/13/12 (9)*

140

0.00



QC

QC21- Final Inspection - Work Order Release

Memo

0.00

Quality Control

11/03/12
mf
11-03-02

Picklist Print

Friday, February 18, 2011 1:52:04 PM

Page 1

Work Order ID: 66529

Parent Item: DSI 9517-011

Parent Item Name: Alternate Wearplate Installation

Start Date: 2/18/2011

Required Date: 2/25/2011

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A new issue DD 10.04.26 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

AN4C54A Bolt		Purchased	No			110	Each	10.0000	4	16			
-----------------	--	-----------	----	--	--	-----	------	---------	---	----	--	--	--

116956 148

Location Loc Qty Loc Code

ST361 10

114455 10

D3403-5 Bushing		Manufactured	No			110	Each	0.0000	8	32			
--------------------	--	--------------	----	--	--	-----	------	--------	---	----	--	--	--

114455 28
66530

D4095-041 Wearplate Assembly		Manufactured	No			110	Each	0.0000	1	4			
---------------------------------	--	--------------	----	--	--	-----	------	--------	---	---	--	--	--

66501 3#1

D4095-043 Wearplate Assembly		Manufactured	No			110	Each	0.0000	1	4 3X			
---------------------------------	--	--------------	----	--	--	-----	------	--------	---	------	--	--	--

66502 3#1 11/3/2

INSTALLER

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D412-742 REV. D
AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D412-742 REV. 3

REF. CANADIAN STC: SH05-37
REF. FAA STC: SR01583SE
REF. EASA STC: EASA.IM.R.S.01126

REFERENCE ONLY

PURPOSE:

The purpose of this service instruction is to introduce an alternate wearplate installation for the D412-742-011/-013 Skidtube Installations. The new DSI-9517-011 Wearplate Kit consists of new wearplates and gaskets destined to replace existing D3564-1/-3 Wearshoes and D3566-1/-3 Gaskets. The components in the DSI-9517-011 Wearplate Kit are as defined in the parts list on sheet 4 of this service instruction.

INSTALLATION PROCEDURE:

Replace D3564-1/-3 Wearshoes and D3566-1/-3 Gaskets with D4095-041/-043 Wearplates Assemblies as follows:

1. Remove existing D3564-1/-3 Wearshoes and D3566-1/-3 Gaskets per Item 32.6.1 of ICA-D412-742. It might be necessary to loosen the aft end of D3564-5 Wearshoe and D3566-5 Gasket.
2. Remove qty.(4) AN4C52A Bolts, D3403-1 Bushings, and qty.(8) D3672-11 Washers as indicated in Figures 1 and 2 of this service instruction.
3. Inspect the skidtube and saddles per Chapter 5 of ICA-D412-742.
4. Seal existing inserts located on both sides of the skidtube in area shown in Figures 1 and 2 of this service instruction using Sikaflex -241/-291 or Proseal 890 or MIL-S-8802 Class 2B sealant.
5. Locate the DSI-9517-011 Wearplate Kit as shown in Figure 1 and 2 of this service instruction.
6. Transfer drill qty.(2) Ø0.438 hole from the skidtube/saddle to the D4095-041/-043 Wearplates Assemblies. Deburr. Touch up finish per Item 5.2.14 of ICA-D412-742 as required.
7. Install the DSI-9517-011 Wearplate Kit using the same AN3C hardware as shown in ICA-D412-742. Torque to 15-25 in-lbs (1.7-2.8 N-m).
8. Install D3403-5 Bushings and AN4C53A Bolts in lieu of D3403-1 Bushings and AN4C52A Bolts removed at step 2 above. Ensure that the nuts on the AN4C Bolts are on the inboard side of the skidtube. Torque to 50-70 in-lbs (5.7-7.9 N-m).
9. Amend weight and balance per the Weight and Balance Table below.

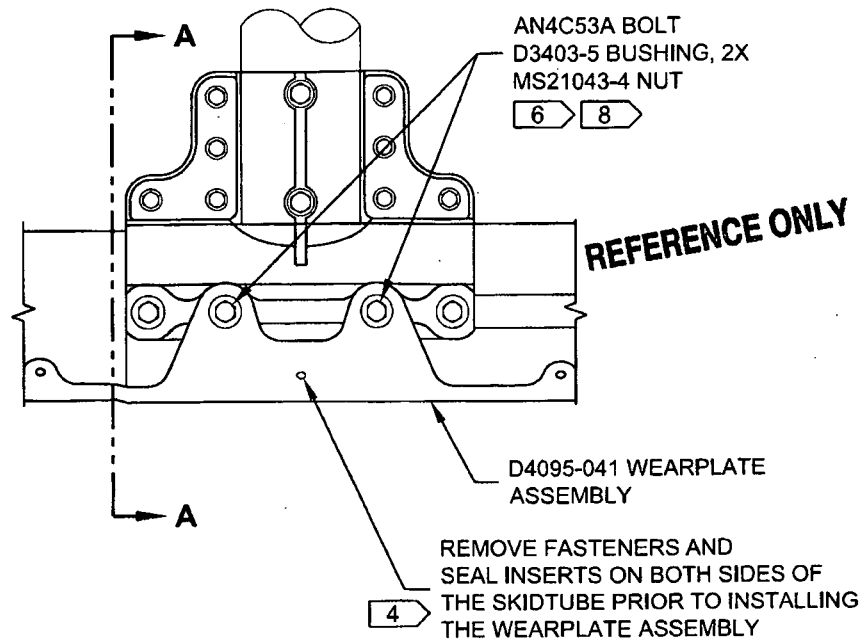
WEIGHT AND BALANCE:

Use the following weight and balance information for DART D412-742-011/-013 skidtube and saddle installations equipped with DSI-9517-011 Wearplate Kit.

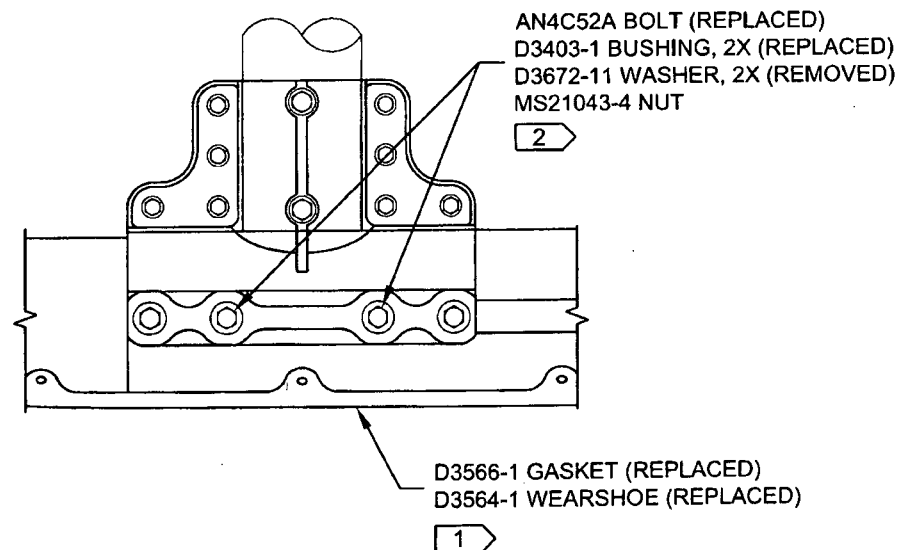
INSTALLATION	WEIGHT	LATERAL		LONGITUDINAL	
		ARM	MOMENT	ARM	MOMENT
D412-742-011 Float Skidtube Installation with DSI-9517-011 Kit Installed	70.0 lb 31.8 kg	±55.0 in ±1.40 m	±3850 in-lb ±44.5 m-kG	130 in 3.3 m	9100 in-lb 105 m-kG
D412-742-013 Float Skidtube Installation with DSI-9517-011 Kit Installed	70.0 lb 31.8 kg	±55.0 in ±1.40 m	±3850 in-lb ±44.5 m-kG	130 in 3.3 m	9100 in-lb 105 m-kG

A	NEW ISSUE	MB	10.04.21
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>JA</i>	DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWN	<i>JA</i>		
CHECKED	<i>qp</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9517	SHEET 1 OF 6
APPROVED	<i>140</i>	TITLE	SCALE
DE APPR.	<i>14</i>	ALTERNATE WEARPLATE KIT	NTS
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IS:



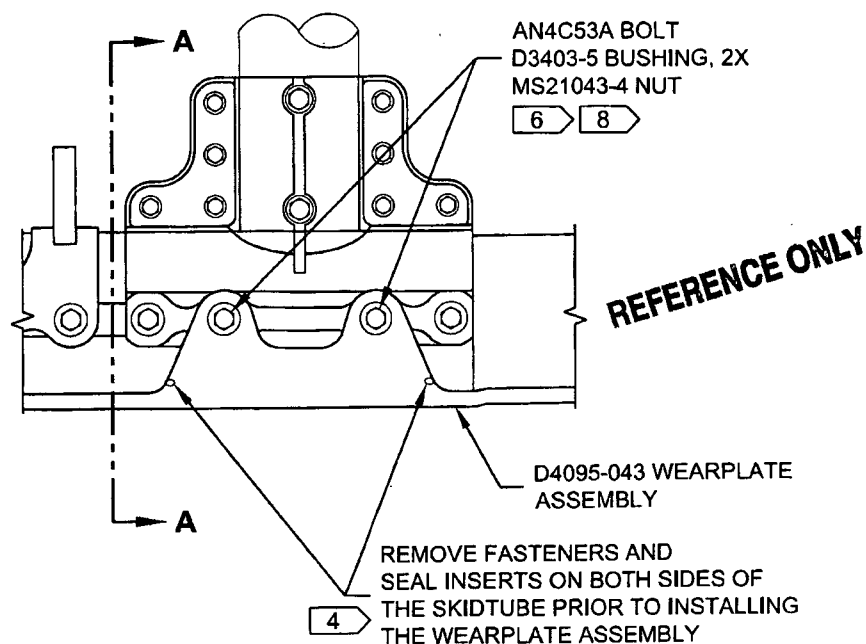
WAS:



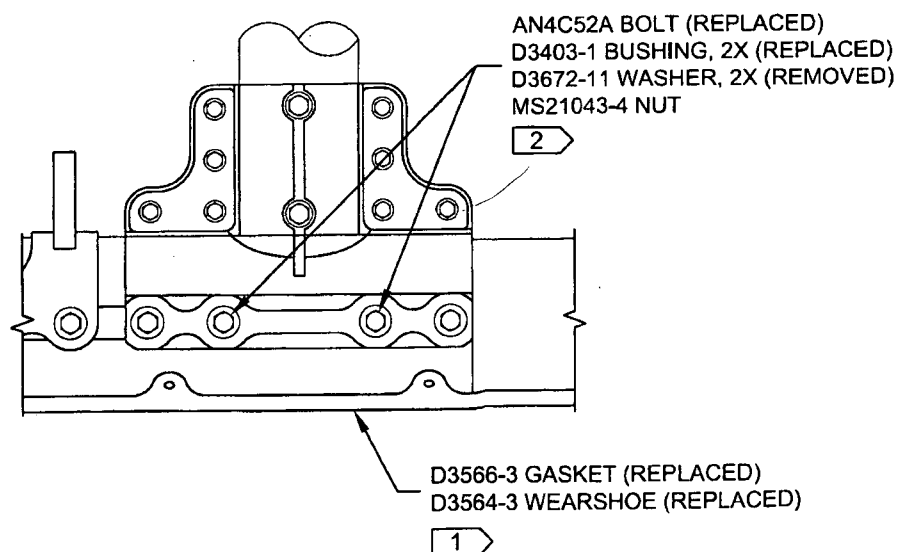
**FIGURE 1: CHANGE AT FORWARD SADDLE LOCATION
WITH DSI-9517-011 KIT INSTALLED**

DESIGN	<i>[Signature]</i>	DART AEROSPACE USA, INC	
DRAWN	<i>[Signature]</i>	PORT HADLOCK, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9517	SHEET 2 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	ALTERNATE WEARPLATE KIT	NTS
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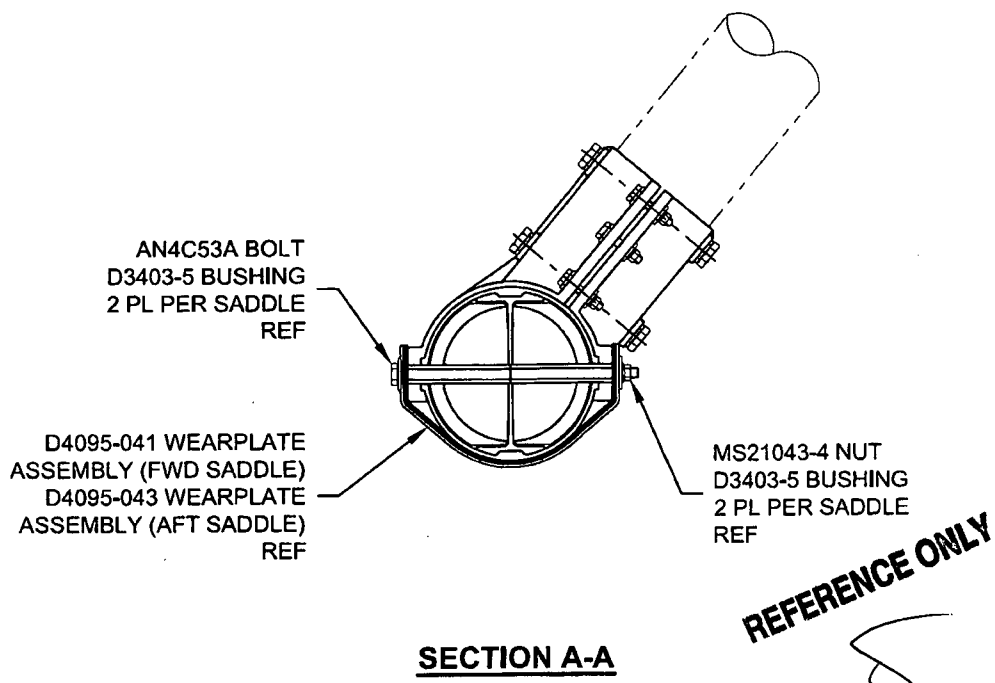


WAS:



**FIGURE 2: CHANGE AT AFT SADDLE LOCATION
WITH DSI-9517-011 KIT INSTALLED**

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MFG. APPR.	N/A	DSI 9517	SHEET 3 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	ALTERNATE WEARPLATE KIT	NTS
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DSI-9517-011 PARTS LIST:

QTY -011	PART NUMBER	DESCRIPTION
X	DSI-9517-011	WEARPLATE KIT
8	D3403-5	BUSHING
1	D4095-041	WEARPLATE ASSEMBLY
1	D4095-043	WEARPLATE ASSEMBLY
4	AN4C53A	BOLT

DESIGN	<i>[Signature]</i>	DART AEROSPACE USA, INC	
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CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9517	SHEET 4 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
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THE PARTS LISTS IN SECTION 32.15 OF ICA-D412-742 (PAGES 53 AND 55) AND SECTION 5.1 OF IIN-D412-742 (PAGES 16 AND 17) ARE AMENDED AS FOLLOWS WHEN OPTIONAL DSI-9517-011 KIT IS INSTALLED:

32.15 D412-742-011 (PMA/OEM) FLOAT SKIDTUBE INSTALLATION PARTS LIST (ICA-D412-742)
5.1 D412-742-011 (PMA/OEM) FLOAT SKIDTUBE INSTALLATION PARTS LIST (IIN-D412-742)

Item	QTY -011	QTY -041	QTY -015	PART NUMBER	DESCRIPTION
	X			D412-742-011	FLOAT SKIDTUBE INSTALLATION
	1	X		D412-742-041	FLOAT SKIDTUBE
	1		X	D412-742-015	ELECTRIC STEP KIT

IS:

3		10		AN3C6A	BOLT (REMOVED QTY.2)
4		4		AN3C7A	BOLT (REMOVED QTY.4)
5		38		AN960C10L	WASHER (REMOVED QTY.6)
21A		1		D4095-041	WEARPLATE ASSEMBLY
21B		*1		*D4096-1 (PART OF D4095-041)	*GASKET (BONDED TO D4095-041, REPLACES D3566-1)
22A		1		D4095-043	WEARPLATE ASSEMBLY
22B		*1		*D4096-3 (PART OF D4095-043)	*GASKET (BONDED TO D4095-043, REPLACES D3566-3)
46	8			D3403-1	BUSHING (REPLACES QTY.4 WITH D3403-5)
46A	8			D3403-5	BUSHING (REPLACES QTY.4 D3403-1)
49	4			AN4C52A	BOLT (REPLACES QTY.4 WITH AN4C53A)
49A	4			AN4C53A	BOLT (REPLACES QTY.4 AN4C52A)
53	8			D3672-11	WASHER (REMOVED QTY.8)

WAS:

3		12		AN3C6A	BOLT
4		8		AN3C7A	BOLT
5		44		AN960C10L	WASHER
21A		1		D3564-1	WEARPLATE
21B		1		D3564-3	WEARPLATE
22A		1		D3566-1	GASKET
22B		1		D3566-3	GASKET
46	16			D3403-1	BUSHING
49	8			AN4C52A	BOLT
53	16			D3672-11	WASHER

*BONDING IS ACHIEVED USING 3M 1300/ 1300L SCOTCH GRIP ADHESIVE.

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CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9517	SHEET 5 OF 6
APPROVED		TITLE	SCALE
DE APPR.		ALTERNATE WEARPLATE KIT	NTS
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THE PARTS LISTS IN SECTION 32.16 OF ICA-D412-742 (PAGES 57 AND 59) AND SECTION 5.2 OF IIN-D412-742 (PAGES 18 AND 19) ARE AMENDED AS FOLLOWS WHEN OPTIONAL DSI-9517-011 KIT IS INSTALLED:

32.16 D412-742-013 (APICAL TRI-BAG) FLOAT SKIDTUBE INSTALLATION PARTS LIST (ICA-D412-742)
5.2 D412-742-013 (APICAL TRI-BAG) FLOAT SKIDTUBE INSTALLATION PARTS LIST (IIN-D412-742)

Item	QTY -013	QTY -043	PART NUMBER	DESCRIPTION
	X		D412-742-013	FLOAT SKIDTUBE INSTALLATION
	1	X	D412-742-043	FLOAT SKIDTUBE

IS:

3		10	AN3C6A	BOLT (REMOVED QTY.2)
4		4	AN3C7A	BOLT (REMOVED QTY.4)
5		38	AN960C10L	WASHER (REMOVED QTY.6)

21A	1		D4095-041	WEARPLATE ASSEMBLY
21B	*1		*D4096-1 (PART OF D4095-041)	*GASKET (BONDED TO D4095-041, REPLACES D3566-1)
22A	1		D4095-043	WEARPLATE ASSEMBLY
22B	*1		*D4096-3 (PART OF D4095-043)	*GASKET (BONDED TO D4095-043, REPLACES D3566-3)

46	8		D3403-1	BUSHING (REPLACES QTY.4 WITH D3403-5)
46A	8		D3403-5	BUSHING (REPLACES QTY.4 D3403-1)

49	4		AN4C52A	BOLT (REPLACES QTY.4 WITH AN4C53A)
49A	4		AN4C53A	BOLT (REPLACES QTY.4 AN4C52A)

53	8		D3672-11	WASHER (REMOVED QTY.8)
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WAS:

3		12	AN3C6A	BOLT
4		8	AN3C7A	BOLT
5		44	AN960C10L	WASHER

21A		1	D3564-1	WEARPLATE
21B		1	D3564-3	WEARPLATE
22A		1	D3566-1	GASKET
22B		1	D3566-3	GASKET

46	16		D3403-1	BUSHING
----	----	--	---------	---------

49	8		AN4C52A	BOLT
----	---	--	---------	------

53	16		D3672-11	WASHER
----	----	--	----------	--------

*BONDING IS ACHIEVED USING 3M 1300/ 1300L SCOTCH GRIP ADHESIVE.

DESIGN	<i>[Signature]</i>	DART AEROSPACE USA, INC	
DRAWN	<i>[Signature]</i>	PORT HADLOCK, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9517	SHEET 6 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	ALTERNATE WEARPLATE KIT	NTS
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Linda Lacelle

From: David Shepherd <dshepherd@dartaero.com>
Sent: February 28, 2011 2:42 PM
To: 'Marc Bellavance'
Cc: 'Petsche, Mike'; 'Lacelle, Linda'
Subject: RE: Tri-Beam for Falcon

Marc,

As discussed, I'm not a big fan of the sloppy fit as I think this will allow the wearplate to rotate around the skidtube in service and create a similar problem to what we already had. So, I'm OK with the wearplate you've already made to 0.50", but I would leave the remaining holes at 0.44". If the customer struggles to get it on at 0.44", then we can allow him to open up to 0.50" in the field.

David

From: Marc Bellavance [mailto:mbellavance@dartaero.com]
Sent: Monday, February 28, 2011 6:34 AM
To: Shepherd, David
Cc: Petsche, Mike; Lacelle, Linda
Subject: FW: Tri-Beam for Falcon
Importance: High

Good morning David,

Further to our discussion about this issue last week, we have not covered upsizing the transfer drilled holes on the wearplates per below.

Mike and I are both in favour of upsizing the holes from Ø0.438 to Ø0.500 for ease of installation but you need to know about this change and we still need your OK.

Marc Bellavance
Technical/Shop Support

DART aerospace Ltd.

Tel: 613-632-5200 Ext. 243

Cel: 613-676-0992

Fax: 613-632-9311

E-mail: mbellavance@dartaero.com

Web: www.dartaero.com

Product Documentation: Verify Revision Status/Download [HERE!](#)



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From: Marc Bellavance [mailto:mbellavance@dartaero.com]
Sent: February 25, 2011 11:03 AM
To: Shepherd, David

Cc: Petsche, Mike; Lacelle, Linda

Subject: Tri-Beam for Falcon

Importance: High

David,

Ian is preparing the DSI 9517 alternate wearplate kits by transfer drilling the holes from the mid tube to the wearplates and he is having slight alignment issues. This is mostly due to going Plus One Rockguard on the wearplates (neoprene gasket was being compressed against the saddle and now the harder material is not allowing for that). Ian has oversized the Ø0.438 transfer drilled holes to Ø0.500 to compensate on the first wearplate. Is it acceptable to upsize the hole on all of them?

Also, still about the wearplates with Plus One Rockguard, I believe that we may have to add the neoprene gasket anyway because removing the gasket creates a gap between the wearplates and saddles and upon torquing the nuts on the bolts, the two top hat bushings will meet resulting into a loose assembly. It might also make installer's life easier by upsizing the holes to Ø0.500.

Marc Bellavance

Technical/Shop Support

DART aerospace Ltd.

Tel: 613-632-5200 Ext. 243

Cel: 613-676-0992

Fax: 613-632-9311

E-mail: mbellavance@dartaero.com

Web: www.dartaero.com

Product Documentation: Verify Revision Status/Download [HERE!](#)



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